

# University News

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MODI AWARD FOR U.R. RAO

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2000  
25th JUBILEE YEAR  
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*Association of Indian Universities*



## *Shastri Indo-Canadian Institute* **FELLOWSHIPS FOR CANADA 2000-2001**

### **I. CANADIAN STUDIES FELLOWSHIPS FOR 2000-2001**

The Department of Foreign Affairs and International Trade, Government of Canada, through Shastri Indo-Canadian Institute, invites applications from Indian scholars for Canadian Studies Faculty Research, Faculty Enrichment, and Doctoral Research Fellowships.

**Eligibility :** Applicants in all categories must be citizens or permanent residents of India and proficient in either English or French. Repeat applications for faculty awards will not be considered until the objectives of the earlier award have been demonstrably achieved.

#### **a. Canadian Studies Faculty Research and; b. Faculty Enrichment Fellowships**

These awards are intended to fund a visit to Canada of up to five weeks in duration to work on projects identified by the applicants. The projects should lead to the publication of scholarly articles in Indian in the case of research awards and the development of courses on Canada in Indian universities in the case of enrichment awards. Preference will be given to projects which focus on topics in the social sciences and the humanities and which lend themselves to enhancing the understanding of Canada, or of the Canada-India relationship, in India.

Applicants will normally be full-time members of the academic staff of a recognized institution of higher education or an equivalent degree-granting organization in India. Faculty Research applicants may also be scholars at research and policy institutes in India or professors emeriti. Applicants should hold a degree equivalent to postgraduate qualification. Applications will be considered from those without these formal qualifications only if successful research and teaching experience can be demonstrated. Applicants able to provide evidence of their interest in or involvement with Canada prior to the application will be preferred. This may be demonstrated by courses already given, research undertaken, active membership in relevant organizations, etc.

Please note that all successful applicants in both faculty categories will be required to attend a Canadian Studies summer-institute-cum-orientation session for four days in May or June 2000 at a location in Canada to be announced and a one day orientation workshop in New Delhi. The remainder of the award period will be spent working on the projects proposed in the applications.

#### **c. Canadian Studies Doctoral Research Fellowships (Canadian Studies Graduate Awards)**

These awards are intended to fund research in Canada for a period of up to ten months on the applicants doctoral dissertation. Preference will be given to applicants whose dissertations focus on topics in the social sciences and the humanities, which are most likely to advance understanding of Canada in India. Applicants must be enrolled as doctoral candidates in a recognized institution of high education or equivalent degree-granting organization and must expect to have completed non-thesis requirements of the Ph.D. by the time the tenure of the award commences.

**II. Shastri Indo-Canadian Institute, with funding from the Canadian International Development Agency (CIDA), invites applications from established Indian Scholars in the areas of Development and Environment, Social and Economic Reform, Private-sector Development, Gender and Development; for the following fellowships :**

**a. Development Studies in Social Sciences and Humanities :** This fellowship enables the Indian Scholar to undertake research and related activities on various development issues. Duration : four months between 1 September 2000 and 1 January 2001.

#### **b. Women and Development**

**i) Faculty Research Fellowship :** These fellowships enable the faculty members of Indian Colleges and Universities to carry out research in Canada. Duration : four months between 1 September 2000 and 1 January 2001.

**ii) Doctoral Research Fellowships :** This fellowship is intended to support research in Canada on the applicant's doctoral dissertation. Applicants must be enrolled as doctoral candidates in a recognized institution of high education or equivalent degree-granting organization and must expect to have completed non-thesis requirements of the Ph.D. by the time the tenure of the award commences. Duration : up to eight months between 1 September 2000 and 1 January 2001.

**iii) Pilot Project Awards :** This award makes possible the preliminary exploration of a research proposal that gives promise of substantial further development. Duration : up to two months between 1 September 2000 and 1 January 2001.

**iv) Visiting Lectureships :** These fellowships enable Indian scholars to visit Canada for a period of three weeks to give lectures and to do some networking with colleagues in their academic area. Duration : three-week lecture tour in Canada between 1 September 2000 and 1 January 2001.

**c. Media Fellowships :** These fellowships supports the research of mid-level journalists in print and electronic media in Canada for a period of four months each to explore in depth a developmental issue. Duration : four months between 1 September 2000 and 1 March 2001.

Since these awards are a part of the Institute's Development Studies Programme, work to be carried out during the tenure of the fellowships must have a clear developmental significance.

**General Eligibility :** Candidates must be; i) citizens or permanent residents of India; ii) have a clear and focused plan of work which can reasonably be implemented during the tenure of the fellowship, and iii) be prepared to leave for Canada no later than 1 January 2001 if selected.

**Value :** i) excursion rate return air ticket between India and Canada; ii) Cdn \$ 500 for books and personal effects; iii) a living and accommodation allowance.

### **ENQUIRIES AND APPLICATION FORMS**

For the application materials please write to the following address specifying the category of Fellowship by sending a self-addressed Rs. 25 stamp post envelope (size 26 cms x 30 cms) superimposing the name of fellowship to: Shastri Indo-Canadian Institute, 5, Bhairi Vir Singh Marg, New Delhi-110 001.

A separate stamped envelope is required for each fellowship Category.

**DEADLINE :** REQUEST for application forms : September 10, 1999 by post and September 17, 1999 in person and for RECEIPT of completed applications : October 1, 1999, 05.00 p.m.

# UNIVERSITY NEWS

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# For Whom the Official Language

Shreesh Chaudhary\*

Hindi and other official languages in India are used in government offices in a form which is archaic and incomprehensible to non-specialist users of even these languages. Some examples of their incomprehensibility are given below :

<u>English</u>	<u>Official Hindi</u>	<u>English</u>	<u>Official Hindi</u>
agency	abhikaran	brochure	vivaranika
chartered	chartarit	courier	vartahar
accountant	lekhakar	exchange	vinimayakendra
creche	shishu sadan	faculty	sankaya
marketing	vipanan	passport	parpatra

Usually, the following arguments are advanced for an indigenous "official" language :

- A sovereign self-respecting country must use its own native language at least for official purposes.
- The language of the government must be comprehensible to the governed.
- This will also standardize, modernize and enrich the language in use.

Examples from the *Comprehensive Glossary of Technical Terms* prepared by the Council for Scientific & Technical Terminology (CSTT) of the Ministry of Human Resource Development of the Government of India (1991), as also from other official glossaries, show that the new terms are more incomprehensible than their English originals. Many Hindi speakers, including even those with a university degree in Hindi, find these terms difficult to understand. Moreover the current practice prevents new words from getting into the language, making it an artificial language which can be used only by the initiated few.

A properly structured survey on the relative comprehensibility of the English and the translated versions of these terms is yet to be undertaken, but random surveys strongly indicate that the purism of the kind displayed by the designers of these glossaries hinders comprehensibility and hampers the growth of the language in question. Even educated speakers of Hindi with university degrees in Hindi as a subject have in the random surveys expressed their ignorance of many of these terms. The random surveys have also been conducted with educated non-native speakers of Hindi and they also feel baffled with these terms. Both educated and uneducated non-native users of Hindi, especially in South and North-East express total incomprehensibility of these terms. So do many translators in the lower echelons of the Official Language departments of Government of India organisations. The only people who do not seem to have experienced any difficulty with these terms are those in the upper echelons of the Official Language departments of these organisations.

This seems to be an unfortunate situation, and, it raises the question of relevance — who are these terms meant for, are they meant for use by the upper echelons of translators in the Official language de-

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partments of government organisations only, or at some point of time later are they also expected to be accepted, adopted and used by general users of the language? If the latter is the main objective behind having translators and translations, then the present policy of this kind for the preparation of glossaries in Indian languages must be reviewed and reformulated. It helps none, neither the users nor the language, nor the organisation using this language. This is only a self-sustaining exercise. According to one estimate, CSTT in the first 25 years of its existence came up with one glossary of technical terms for administration, but during this period approximately Rs. 50 crore were spent on it. A country like India, which has among the lowest allocations for education in the world, can ill-afford luxuries of this kind.

Worse still, this kind of tendency in a central government organisation sets a trend for regional organisations of this kind to follow. So the rendering of these English terms in Marathi, Tamil, Kannada or Telugu has also become so opaque and remote that they cannot be used easily by the average users of these languages. In a comprehensive review of the suitability of Indian languages for use as the language of law and justice, Jennifer Bayer in a monograph published by the Central Institute of Indian Languages (CIIL), Mysore in 1986 shows that though Tamil has made much progress in this regard, it is yet to come close enough for the common users of Tamil to adopt and use Tamil for legal purposes. Bayer also shows how Tamil, and by implication other Indian languages too, are yet to achieve the standardisation and uniformity in the coining and use to legal terms. The same term may represent a different concept in a different context, as the same concepts in different contexts may be represented by different terms.

Part of this confusion may owe to time. With time, one may argue, people will get used to these terms, and then they would have one to one relationship with the concepts. Perhaps that is true. But part of the problem is also to do with a marked tendency to ignore existing terms and terms in popular use due to preference for the purist kind of coined words. In another study published in 1986, Prof. E. Annamalai and his colleagues of the CIIL present some examples of such a preferential tendency among the designers of these glossaries. Looking at it from the point of view of the problem faced by the lexicographer of such languages, they observe that these neologisms coined by committees may have the authority of the planner, but they do not have the acceptance of the user. There exist corresponding common words which sound ordinary. The following are examples of such pairs where the

words in the last column were created by the Hindi Parishad.

<u>Glossary</u>	<u>Common Word</u>	<u>Coined Word</u>
fishing rod	bansi	a:khet danda
arsenic	sankhiya	nepalaj
sulphur	gandhaka	sulbari
auction	nilam	koshavikraya
octroi	cungi	dwa:radeya
tehsil	tehsi:l	bhukti

There seems to be no reason why common words are not acceptable to designers of these glossaries. All may agree that a nation must have a national language. Mostly it is an indigenous language, as in Japan; or, a mixture of indigenous and some foreign language, as in Indonesia, Malaysia and Thailand; or, it can even be a foreign language which serves the purpose of being the national official language, such as in Singapore. Unless we are jingoistic, there is nothing very wrong in the policy of the latter kind too. A great deal of wisdom has been shown in this matter by a tiny country like Singapore. It has three principal languages, Chinese, Malay and Tamil. They are all national languages and receive government patronage in education and culture. But the official language of the city nation is none of these, it is English. And, for that matter, Singapore is not second to any country in Asia, as far as culture, power and prestige go.

Regardless of any other consideration, a national/official language must be comprehensible to a vast majority of its own people, otherwise the very purpose of having a national language as the official language is lost, unless of course the purpose was purely and only ornamental. Most people, including the Indian National Congress, during India's long struggle for independence had also demanded that India should adopt an Indian language, preferably Hindi, for use for official purposes. The long debate over Hindi versus Hindustani during this movement had more to do with the level of comprehensibility of one over the other to the common person.

#### **Gandhiji's Criteria**

Expressing the majority voice of common sense, Gandhiji set out some clear criteria for the design of an official language for free nations. Giving the presidential address at the Second Gujarat Educational Conference at Broach on October 20, 1917, Gandhiji suggested that for any language to have the status of the 'national language', it must satisfy the following requirements :

1. It should be easy to learn for government officials.
2. It should be capable of serving as a medium of religious, economic and political intercourse throughout India.

3. It should be the speech of the majority of the inhabitants of India.
4. It should be easy to learn for the whole of the country.
5. In choosing this language, considerations of temporary or passing interest should not count. (Hingorani, 1965 : 6-14).
5. Indigenous terms, which have come into vogue in our languages for certain technical words of common use, as far for telegraph/telegram, etc should be retained.
6. Such loan words from English, Portuguese, French, etc, as have gained wide currency in Indian languages should be retained, e.g. ticket, signal, pension, police, bureau, restaurant, deluxe, etc. ...

Gandhiji argues :

... I call that language Hindi which Hindus and Muslims in the North speak and which is written either in the Devanagari or Urdu script. The difference, (as seen between Hindi and Urdu) has been created by the educated classes. Educated Hindus Sanskritize their Hindi with the result that Muslims cannot follow it. In the same way, the Muslims of Lucknow Persianize their Urdu and make it unintelligible to Hindus. To the masses, both these languages are foreign and for which they have no use... The sweetness that I find in village Hindi is found neither in the speech of the Muslims of Lucknow, nor in that of the Hindu pandits of Prayag...

Interestingly enough the criteria suggested by Gandhiji almost totally anticipate the criteria laid down later by CSTT for the preparation of the *Comprehensive Glossary of the Technical Terms* (1991). CSTT suggested the following 'Principles for Evolution of Terminology Approved by the Standing Commission for Scientific and Technical Terminology.

1. 'International' terms should be adopted in their current English forms, as far as possible, and transliterated in Hindi and other Indian languages according to their genius. The following should be taken as examples of 'international' terms :
  - (a) Terms based on proper names, e.g. Marxism, Braille,...
  - (b) Words like telephone, license, royalty, permit, tariff, etc.
2. Conceptual terms should generally be translated.
3. In the selection of Hindi equivalents simplicity, precision of meaning and easy intelligibility should be borne in mind. Obscurantism and purism may be avoided.
4. The aim should be to achieve maximum possible identity in all possible Indian languages by selecting terms :
  - (a) common to as many of the regional languages as possible, and
  - (b) based on Sanskrit roots.

But, as other examples may show, there are numerous instances of violation of all of these criteria and excessive adherence only to the one mentioned at (4b), i.e. terms based on Sanskrit roots. Such zealous adherence to purism neither enhances comprehensibility nor does it enrich the language. One might go to the extent of saying that if a language fails to move with time and confines itself to the status of the language of the small elite, then it might be the beginning of the end of this language. A good piece of evidence for such pessimism can be found in the demise of Sanskrit in India itself as the language first of popular and then of academic use.

As a tongue in cheek remark, Prof. Ambirajan observes,

... 'purity' is an excellent attribute for *desi ghee* or *Tirunelveli halva* but is of doubtful use when it comes to language. Whenever national chauvinists tried to forcibly uphold the virginal purity of their languages from outside influences, they have failed. The proud Frenchmen who are anxious to protect their language from the ugly impact of English are only fighting a losing battle. Indeed even in England, whose language has absorbed elements from all over the world, there have been attempts to maintain English from contamination. Just as our purists want the return of the Sanskrit-Hindi or Sangam-Tamil, fiercely nationalistic Englishmen in the nineteenth century desired Saxon-English. They were proud of their medieval ancestors who spoke a kind of pure English with its penchant for translating Latin or Greek compounds instead of using them straight...

The most famous protagonist for pure English was William Barnes (1801-1886) and he did make a heroic effort to eliminate Latin and Greek words from English. He tried to make words with Saxon origin popular, such : bookling (pamphlet), breaksome (fragile), folkdom (democracy), gleeman (a musician), gleemote (a concert), licherest (cemetery), loremote (a symposium), mindtoken (a symbol), wortlore (botany), etc. Barnes had quite a following in his time. But, as Prof. Ambirajan concludes, luckily for English philologists were not enthusiastic about linguistic purity.

## Undisputed Link Language

English, as is well known, has borrowed from any language its speakers came in contact with, and today it is the undisputed link language of the world. French, on the other hand, were over-protective. They set up an academy to keep their language 'pure' and to keep out all foreign words even when these foreign words were used by French people or by those ruled by them. Today Britain earns over a billion pounds and a half per annum from its export of English language courses, books and other material, whereas the French government spends about as much money and other resources to save French in its own land.

Under the caption 'La Gloire Francaise', *The Times*, London reported on 19th Nov., 1991 :

This week a conference in Paris will re-examine the threat to the francophone world posed by the advance of English as the world's second language. Not only outside Europe but even in Latin countries such as Spain and Italy, English is on the march; the French are fighting a rearguard action to keep English from taking over as the official language of any future European federation. For practical purposes, this is already happening among bureaucrats and business people in their twenties and thirties...

The treatment by the French elite of their language as an endangered species, to be protected from foreign influences rather than forced to adapt, often blinds them to new opportunities. A language that does not travel, *The Times* columnist rightly concludes, has no future. The zealots of purism in official languages in India, be it Hindi or Tamil, are doing a positive disservice to their respective languages by insisting upon the use of only a particular kind of terminology. For many reasons India cannot take or even afford such exclusivism.

One reason for the failure of purist attempts in India can be its diverse cultures — no attempt to impose only one form upon the entire country has any chances of success here. The British and some of their successful predecessors understood this national trait fairly well. That is why the British accepted the use of a lot of Persian/Arabic terms and Urdu and other scripts in the administration of revenue and justice. Some of their successful predecessors from the Mughal dynasty did so too. India, they recognised, has substantial variety even within a so-called language zone. As Jennifer Bayer observes,

...even within a single language zone there is no dearth of examples which create problems for those who seek uniformity... In the Hindi Zone, the word for director is 'nirdeshak' and 'sanchalak'.

...for the word 'grievance' central glossary gives 'shikayat', UP uses 'kash', Bihar 'vyatha', and MP 'dukh'...

If one looks across languages, she further argues, one would find that while in Bengali 'shiksha' means 'education', in Marathi it means punishment. Marathi makes a distinction between 'shiksha' and 'shikshan'. One reason why legal terminology in India poses a problem, according to Bayer is that choice of Sanskritic, Persian or popular vocabulary would determine the style of the text. A certain kind of terminology would go only with a certain kind of text. We can, according to Bayer, either say 'dant chikitsalaya' or 'dant ka aspatal'. And this choice may not be easy. Translation of the legal English, Bayer observes, into Indian languages is a problem. One has to accept the fact that there is no precise equivalent of many English words in other languages, and that the ideas expressed by them are not familiar to the speakers.

In 1976 the Government of Tamil Nadu decided that all judgments of the court of law shall be written in Tamil. The Criminal Procedure Code, the Indian Penal Code and the Indian Evidence Act were translated into Tamil. One of the objectives of translation was that translation should be in a style easily understandable by the common man. In rendering the legal text into Tamil, the translators used terms drawn from old Tamil literature. For example, words for 'assertion' — 'araidal', 'declaration' — 'vilambal'.. etc are taken from old Tamil literature. Existing terms, one feels tempted to add, could have more effectively been used in Tamil sentences.

During the period when late Sri Govind Menon was the Law Minister of India, a formula was evolved by consensus in the Law Ministers' Conference. This formula was that a term which adequately expressed a legal concept or idea prevalent in a region should not be replaced by a term coined by the Official language (Legislative) Commission in order to secure terminological uniformity. This was a good idea. But the official glossaries seem to have ignored even this. They are translating even telephone, post office, airport etc, with the result that the use of these exotic terms is confined only to a few documents in the government offices. No bigotry of the DMK party has stopped Tamil speakers from watching Hindi movies and Hindi film songs on television networks in Tamil Nadu, neither has it stopped them from learning and using Hindi. A very similar thing might happen to the official Hindi too.

It may be argued that general words acquire technical meaning through usage. If the purpose is to make the official language comprehensible to the users, then



the prevailing terms in the popular language ought to be allowed. If the purpose is to enrich the language in question, even then the terminology in currency should be allowed. The language in question acquires so many more words for free, and gets richer to that extent. The learners and users of these terms do not have to use another set of new terms when learning a new language. An approach of this kind may not appear to be very sophisticated, but it may be eminently sensible and a very determined and promising step towards crossing the barriers of language and script in a multi-lingual country like India.

Nepal seems to have done a good job of designing its official language. It has refrained from going for archaic terms as equivalents of English. It has, on the other hand, shown enough courage to accept words of common use as technical terms for official language. This can be seen in any document in Nepali.

But the most sensible effort of this kind was made in the Soviet Union, and this aspect of the Soviet experiment can be commended in spite of the fact that the Soviet Union model of politico-economy and cultural experiment in general seems to have failed and is in disrepute today.

In a review of the Soviet language policy, Tulsi Ram in his book *Trading in the Language* reports that there were 130 languages spoken by the Soviet people. Of these only 20 possessed written norms and only four — Russian, Ukrain, Georgian and Armenian — had their own scripts. These 130 languages belong to the four great world family of languages. Soviet leaders and language planners recognised that a common language is needed during the consolidation and establishment of a nation, and this can only be a living language, not a dead one : it must develop rapidly and in a flexible manner, and must also absorb the richness of the individual dialects as well as of the spoken language. They brought about a veritable cultural revolution by substantially latinising their scripts and writing system to be at par with the dominant cultures of Western Europe and Americas.

The result of the process of lin-

guistic construction was linguistic interaction, especially lexical convergence, under the further processes of economic and cultural reconstruction. There was an increasing number of new words borrowed from Russian language into the vocabulary of all languages. A comparative analysis of the editorials of the newspaper written in 1924, 1930 and 1940 shows that there were 14 new words or items per thousand in 1924, 68 in 1930, and 236 in 1940. Further the enrichment is mutual. Most of the other words from Russian borrowed into other languages or dialects are toponyms. This has been possible through a conscious, controlled and intensive development of the literary languages of the various peoples through linguistic interaction encompassing language replacement, mixing of languages, hybridization and superstratum, and, above all, through scriptural revolution.

The movement of Indianising the official language in India has a very successful model and a valuable lesson to learn in this. □



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August 30th '99 for admission in 2000.

# Listening for Speech Sounds

Mathew M. Anjilivelil\*

S. Mohan\*\*

It is agreed that in the process of language learning, listening is the first and foremost activity. Without setting foot on this first step of the ladder one cannot climb further. Listening skill is the first complementary one towards the development and acquisition of other more active skills such as speaking, reading and writing in the hierarchy of language learning.

Listening is considered as linguistic communication of receiving information. Different people have different ends in listening to others. A doctor has his purpose when he listens to a patient, a judge has a different purpose when he listens to lawyers and petitioners; of course, a legislator has his own purpose to listen to people. People of social role and status listen to others to get information for the purpose of arriving at a decision or to pass judgements or to incorporate ideas in the statutes under preparation with them and so on. But here the focus of this discussion is only on listening as a language learning skill, not as linguistic communication of receiving information.

Hearing is more or less a passive activity and this is mistaken for listening by the taught and sometimes even by the tutor. But listening is an involved exercise though the external visible organs are not employed in the realization of this activity. What is received by the sense organ, ear — in the case of face to face talk, by the eye too — is transmitted to the brain's corpus collosum, the seat of memory, through nervous transmission and decoding process takes place interpreting what is received and finally storing there what is needed by separating and rejecting what is seemed unnecessary and excess. A language learner should be made aware, at the beginning itself of the difference between "hearing" and "listening" and the levels of importance to be attached to these two seemingly similar activities according to the context/situation and the interest one should show and the importance he/she should give to these exercises as per the situation's demand.

For English language learning, that too, when it is done in a second language learning or foreign lan-

guage learning situation, listening practice is vital for the realization of sound accuracy. English is an "unphonetic" language i.e. it is not said/read/pronounced as it is written or as the letters/spellings suggest. Take some simple examples : In the words "cup", "cease", and "chin", the letter 'c' stands to represent three different sounds. This is the case with all letters in English. This phenomenon is found vice versa also. Different letters stand to represent same sound in different words. E.g. kettle, cut, question. The letters 'k', 'c' and 'q' stand to represent the same sound in all these words. From the utterance point, some letters are redundant in certain words, as 't' in 'listen' and 'often', 'k' in 'know' and 'knife' and 'b' in 'doubt' and 'debt'. We know how the words like 'lieutenant' and 'colonel' are pronounced. The lack of this one-to-one relation between the letters and sounds they represent makes the situation very much difficult for a non-native/foreign student to make utterances of English sounds, though not exactly, but at least very much akin to the native speakers', very difficult. So it is imperative that an English language learner should submit himself to the utterances of the native/competent individuals who make English sounds intelligible to the listeners.

A language learner while listening to the speech sounds should take sufficient care not to distract his attention to get the content comprehension of the speech. He should try to get the speech sounds only. In other words, he should never try to get the meanings of the words or the content of the speech, but listen to words as sounds, with the sole intention of catching the articulation of words as speech sounds. Care should be taken to deduce how the English sounds are different from his language, his mother tongue.

Most of the learners who learn English as foreign/second language, learn their mother tongue before they start learning English. So the learner should try to differentiate the nearest sound in his language and the sound in English language. Learners who don't have much good exposure to English language situation, are very much under the grip of the influence of mother tongue. For example, in Tamil Nadu some learners find it difficult to make a clear distinction between /p/ and /b/, and /t/ and /d/

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sounds initially, because of a strong vernacular halo as these two sets of sounds are not represented by four different letters. The first sounds in 'that' and 'thin' are not made distinctively different by the South Indian learners of English. There are very many instances of these types. Language experts/researchers have attributed reasons for these types of errors to the vernacular influence, though other influencing factors are also there.

Sometime or other the speech sounds have to come out from a language learner. So silent speech practice, speech within oneself, is of no use. It cannot give him practice. Silent practice can give perfection to the 'pseudo-satisfaction' of the learner. The learner has to speak/produce sounds aloud. One cannot produce sounds and make judgements for his/her sound accuracy simultaneously, for when he produces sounds he has to do some physical labour involving the speech organs for the production of sounds and hence his judgement faculty cannot function effectively as it will be outweighed by the effort he takes for the production of sounds. So his own recorded voice when heard when he is in a reposeful mood will be of much help. Hence the use of tape recorder, to record his own voice and later to hear it, is recommended.

The learner may keep two tape recorders side by side, one with a recorded speech (taken as standard speech) and the other with an empty cassette to record his sounds. Start the first recorder to play, and listen to the words/speech sounds. Make a note of the speech sounds that baffle him and record his voice for the sounds he has noticed. Then let him listen to his speech sounds from the recorder. He can compare his sounds with the standard speech sounds. Let him make out the distinction. Repeat the process till he is satisfied.

The same method can be followed to get practice in discourses too. The learner can listen to recorded discourse of some standard speakers. He may then reproduce some discourse portions in his own voice and record the same to hear them later to make comparisons. He may continue practising it till he gets the "music of English language", catching stress, intonation and tone-groups of the language. From certain simple experiments conducted, the authors are of the view that from the practical point of view this method yields better results/output than the theoretical teachings and making the learner merely hear the recorded utterances. There it becomes more a hearing process than a listening one.

The present authors made a study with some learners who were very poor in vocalising English words and were of equal standard. The ones who listened to the standard recorded speech sounds and compared their own recorded sounds of the same words to make distinction and made attempts for improvement could show speedier and better progress than the others who listened to the standard recorded sounds and took practice by producing sounds aloud without listening to their own recorded sounds.

What sort of English one follows is not a matter at all provided it is the accepted English of the area. It is better to hear the English that one hears most often and acquire a good variety of pronunciation of the area concerned. It may not be suitable for a second language learner to follow BBC English as model. More important factor is that the speech sounds should be intelligible to the fellow users of the language. A learner in India may follow the General Indian English (GIE). It would be intelligible to his fellows though it is slightly different from standard English (RP) in pronunciation, but not different at all in grammar and vocabulary. □

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# Teaching Environment Law

Ramesh\*

## Introduction

The Bar Council of India has revised the curricula for three-year and five year law courses for implementation from the academic year 1998-99.<sup>1</sup> By virtue of this circular the number of subjects in three year LL.B. course have been increased to 28 from 18. Of these, 21 subjects are to be taught compulsorily, three optional subjects from amongst 15 optional subjects listed by the Bar Council of India and 4 Practical Training Papers.<sup>2</sup> Environmental Law is also one among the 21 compulsory subjects.<sup>3</sup> Many universities have already started teaching Environmental Law in the first year LL.B. from the academic year 1998-99. What is the importance of Environment and its law in the present day context? Is it necessary or inevitable to teach this subject to the law students? An attempt has been made in this article to examine the desirability of introducing this subject in the legal curriculum.

Man is a social animal. He has liberty in the society to behave in his own way. This we may also call his right, claim, and interest. But this right cannot exist without the corresponding duty.<sup>4</sup> For example, one can swing his own hands as he likes, this is his liberty, but he has no right to hit the nose of others while swinging his hands, to that extent his liberty is duty bound. It is said and truly so, that living beings are the product of their environment. A good environment helps all round development of one's personality and a bad environment inhibits its development. It affects living beings both directly and indirectly.<sup>5</sup>

Nature has bestowed upon us innumerable valuable things. The world of human beings, the flora and the fauna, living in and around us are the natural resources for the constituents of the *Pancha Mahabhuta*. They are the giver of life; in modern terms, "the life supporting system". They sustain and promote our health and the five elements of nature the sky, air, fire (energy), water and soil (land) — provide the needs of life throughout our entire life. They, therefore, are the genuine treasure of every country. Indians have been worshipping *Prithvi*, the earth as (*Mata*) (mother). Long, long before without going to participate in the seminars on environment or eco-

movements, Indians used to domesticate animals, worship the Cow and the trees, offer grains to the birds and loaves to the dogs and the cows. Such traditions are woven into India's cultural fabric.<sup>6</sup> The blue space viewed as the ethereal canopy over the earth, the moving air, the water flowing or conserved and the land on the plains and the hills that allow raising of fields, farms and forests on it are all varied forms of nature. To a considerable extent this concept resembles the English concept of WEAL which connects Water, Earth, Air and Life. 'WEAL' not only means property, but also the welfare of the society. The *Pancha Mahabhuta* has thus universal application.<sup>7</sup>

The exploitation of environment by man is nothing new. His greed in the name of 'development' is quite alarming. This has increased to the maximum in the 20th century all over the world. The new industrial policies of various governments not only helped exploitation of resources but also regularised it by way of granting permit or licence. What do we mean by 'development'? Should this word confine only to 'economic development'? Or, should it extend to cover all the development of all the citizens of the country? 'Development' means gradual unholding growth, evolution, well grown state in more elaborate form etc. Anthropologically, it is an unfolding of human personality — in all respects. 'Economic development' has been considered as development of a state through agricultural and industrial production. Man exploits natural resources like ores, minerals, oils, and underground waters but substitutes nothing to maintain equilibrium. The framers of the Indian Constitution have cautioned the state by inserting many articles in the Indian Constitution — it is the lesson they learnt from history. It was rightly pointed out by Jennings that "All constitutions are the heirs of the past as well as the testators of the future."<sup>8</sup>

## Constitutional Provisions and International Obligations

The Constitution of India came into force on 26th January 1950. At that time, it did not contain any specific and strict provisions dealing directly with environment. The only provision which was of some significance, was Article 47, of the Directive Principles of State Policy which reads :

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“The state shall regard the raising of the level of nutrition and standard of living of its people and improvement of public health as among its primary duties.”

Article 21 of the Constitution which deals with the right to life and personal liberty was not of much help in the beginning as it was given a very restricted and narrow meaning. This Article runs as follows :

“No person shall be deprived of his life or personal liberty except according to procedure established by law.”

But in due course of time the problems of pollution and environment started drawing attention of environmentalists. In the year 1972 Prime Minister, late Mrs. Indira Gandhi, attended the United Nations Conference on Human Environment at Stockholm. In that Conference the following two resolutions were passed,<sup>9</sup> which are known as the *Magna-Carta* of our environmental law;

- (a) Man has the fundamental right to freedom, equality and adequate conditions of life in an environment of quality that permits a life of dignity and well being; and
- (b) Man bears a solemn responsibility to protect and improve the environment for present and future generations.

The Stockholm Declaration further resolved that

- the natural resources must be safeguarded for benefit of present and future generations through careful planning or management.<sup>10</sup>
- The heritage of wild life and its habitat should be safeguarded.<sup>11</sup>
- Economic system should be protected and struggle against pollution should be supported.<sup>12</sup>
- Pollution of sea should be prevented.<sup>13</sup>
- Economic and social development is essential for ensuring a favourable living and working environment of man for the improvement of the quality of life.<sup>14</sup>
- State should adopt an integrated and coordinated approach to their development planning.<sup>15</sup>
- Education in environmental matters is essential and mass media should help in this.<sup>16</sup>

The Stockholm Declaration is an important document as far as the international and national envi-

ronmental movement is concerned. The General Assembly of the United Nations also passed a resolution on 15th December 1972 emphasising co-operation between the States in the field of conservation of human environment. June 5th is designated as the World Environment Day by the U.N. and it has urged the member states to undertake on that day every year world-wide activities reaffirming their concern for the preservation and enhancement of the environment.

Owing to the above international obligations of Stockholm Conference on Environment, India being one of the signatories, decided to effectuate these obligations through an amendment to the Constitution. In 1976 under the leadership of late Mrs. Indira Gandhi the 42nd Constitutional Amendment was passed and provisions regarding the protection of environment were incorporated into it. In the Chapter of Directive Principles of State Policy<sup>17</sup>, a new provision in the form of Article 48-A was incorporated which runs as follows :

“48-A *Protection and Improvement of Environment and Safeguarding of Forests and wildlife*— The State shall endeavour to protect and improve the environment and to safeguard the forests and wildlife of the country.”<sup>18</sup> Apart from this provision, a new provision in the form of “Fundamental Duties” as Article 51A was also incorporated by the 42nd Constitution Amendment, Sub-Clause (g) of which is important and provides :

“It shall be the duty of every citizen of India to protect and improve the natural environment including forests, lakes, rivers and wildlife, and to have compassion for living creatures.”<sup>19</sup>

The above principles and objectives of international organisations were again confirmed by the Rio and Berlin summits. The Rio de Janeiro Summit ended on June 14, 1992 after adopting the Rio declaration, Agenda 21 and the declaration on principles of Forests.<sup>20</sup>

The following is the Rio declaration on principles of general rights and obligations on environment protection initiated by Heads of Governments at the United Nations Conference on Environment and Development. The summit proclaims that :

There shall be sustainable development, and the environmental issues are best handled with the participation of all concerned citizens, at the relevant level.



State shall develop national law regarding liability and compensation for the victims of pollution and other environmental damage.<sup>21</sup>

The U.N. Climate Conference in Berlin adopted a mandate on strengthening the 1992 Rio Climate Treaty. It obliges developed countries to set objectives for further emission cuts by 1997. The agreement adopted at the U.N. Climate Conference on April 7, 1995 includes a tool that could well go beyond battling global warming and give poor countries their best access yet to rich nations technologies.<sup>22</sup>

Apart from the above international summits, there were few regional summits held for the purpose of protecting the environment. They are :

- (a) International Union for Conservation of Nature and Natural Resources (IUCN), held in New Zealand in October, 1981.
- (b) International Conference on Environmental Education held on December 16-20, 1981 at Vigyan Bhavan, New Delhi.
- (c) Resolution of Non-Aligned Conference held at New Delhi — 1983.
- (d) Final Act of the Conference on Security and Cooperation in Europe, 1975.
- (e) European Community on Environment, the summit held at Paris during October 1972.<sup>23</sup>

#### The Main Acts Which Control Pollution

By the 42nd Amendment Act 1976, two important Articles were inserted in the Indian Constitution. They are Article 48A and 51A in the Part IV of the Indian Constitution. On the basis of these two articles, The Water (Prevention & Control of Pollution) Act 1974 and The Air (Prevention & Control of Pollution) Act 1981 were passed. As the water is the State subject,<sup>24</sup> on the request of 12 states the Parliament has passed Water (Prevention and Control of Pollution) Act 1974 under Article 252 of the Indian Constitution.<sup>25</sup>

Though the Statement of Objectives of Water Act 1974 are outstanding, the Act became ineffective because of many weak points under various sections. To illustrate :

- (1) There is no provision for establishing the Water Board for Union Territories.<sup>26</sup>
- (2) The post of Consulting Engineer is purely temporary and the Chairman has power to appoint him only for 4 months.<sup>27</sup>

(3) Though the Borrowing Powers have been conferred on Water Board, no autonomy has been given, it has to take the approval of central government. But so far no such powers have been granted to Water Board.<sup>28</sup>

(4) The weakest point is lodging the complaint by an individual. Section 49 says

No court shall take cognizance of any offence under this Act except on a complaint made by :

- (a) Board or any officer authorised in this behalf by it; or
- (b) Any person who has given notice of not less than 60 days, in the manner prescribed, of the alleged offence and of his intention to make a complaint, to the Board or officer authorised as aforesaid.<sup>29</sup>

This implies that an individual who wishes to lodge a complaint will be forced to wait for 60 days.

(5) The establishment of Water Board under the Water (Prevention and Control of Pollution) Act 1974 by virtue of Article 252 of the Indian Constitution is not mandatory on all the states. As a result various states have not made any attempt to establish the Water Board.

(6) There is a serious criticism that the central and state governments have failed to release the grants for the effective functions of the Water Board. As a result many recruitments to various important posts could not be done by the Water Board.

The Air (Prevention and Control of Pollution) Act was passed in 1981 along with the rules. It is true that the statement of objects and reasons of the Air Act 1981 confers effective powers on Air Board but the fundamental deficiencies of the Air Act 1981 are that the task of controlling the air pollution has been given to the Water Boards in the states where the Water (Prevention & Control of Pollution) Act 1981 has been passed. This is by virtue of Sections 3 & 4 of the Air (Prevention & Control of Pollution) Act 1981.<sup>30</sup> Many such weak points can be found in the Air Act. Further, the State Air Boards have completely failed in implementing the provisions of Air Act.

Except in Tamil Nadu, Maharashtra and Gujarat, where a number of prosecutions were launched and convictions effected, the enforcement has been poor in other states and union territories.

The Parliament was thus forced to enact a comprehensive legislation called the Environment (Pro-

tection) Act, 1986 along with rules. The Parliament woke up after 36 years of independence to legislate this comprehensive Act. The passage of this Act was hastened by the Bhopal Gas disaster of 3 December 1984 in which over 3,500 persons were killed and as many as 2,00,000 persons were injured — many seriously and permanently disabled. It is a comprehensive Act covering all types of pollution, including harmful chemicals, deforestation, polluting high seas, disposal of hazardous substances and also fixing the standards for maintaining and protecting the environment.<sup>32</sup>

Yet the Environment (Protection) Act 1986 is also not without its lacunae. Under Section 19, an individual who wishes to lodge a complaint has to give at least 60 days notice.<sup>33</sup>

The other important legislations are :

The Water (Prevention & Control of Pollution) Cess Act 1975 and Rule 1978.

The Hazardous Wastes (Management & Handling) Rules, 1989.

The Manufacture, Storage and Import of Hazardous Chemicals Rules 1989.

And Important Laws relating to Forests and Wildlife.

### The Judicial Response

When the Executive fails to perform its duties, the last resort is to depend on the Judiciary. This is because Judicial review has been accepted in our country as against the parliamentary supremacy prevailing in England.<sup>34</sup> It is the duty of the courts to protect and enforce fundamental rights when they are violated against a person.<sup>35</sup> In fact the contribution of Judiciary in protecting the environment is outstanding. It may be the riparian rights, or the right to get pollution free water and air as held in *Subhash Kumar Vs. State of Bihar*<sup>36</sup> where the Supreme Court held that public interest litigation is maintainable for ensuring enjoyment of pollution free water and air which is included in the "right to live" under Article 21 of the Indian Constitution. Further in *Rural Litigation and Entitlement Kendra Vs. State of Uttar Pradesh*<sup>37</sup> the Supreme Court ordered the closure of certain lime stone quarries on the ground that there were serious deficiencies regarding safety in them. The court had appointed a Committee for the purpose of inspecting certain lime stone quarries. The Committee had suggested the closure of certain categories of stone quarries having regard to adverse

impact of mining operation therein. A large scale pollution was caused by lime stone quarries adversely affecting the safety and health of the people living in the area.

In *Shriram Food & Fertilizer Industries and Others Vs. Union of India*,<sup>38</sup> the Supreme Court directed the Company manufacturing hazardous and lethal chemicals and gases posing danger to health and life of workmen and people living in its neighbourhood, to take all necessary safety measures before re-opening the plant. There was a leakage of chlorine gas from the plant resulting in death of one person and causing hardships to workers and residents of the locality. This was due to the negligence of the management in maintenance and operation of the caustic chlorine plant of the company. The matter was brought before the court through a public interest litigation. The management was directed to deposit a sum of Rs. 20 lacs by way of security for payment of compensation claims of the victims of Oleum gas leak with the Registrar of the court. In addition, a bank guarantee for a sum of 15 lacs was also directed to be deposited which shall be encashed in case of any escape of chlorine gas within the period of three years from the date of the judgement resulting in death or injury to any workman or any person living in the vicinity. Subject to these conditions the court allowed the partial re-opening of the plant.

In *M.C. Mehta Vs. Union of India*<sup>39</sup>, the Supreme Court ordered the closure of tanneries at Jajmau near Kanpur, polluting river Ganga. The matter was brought to the notice of the Court by the Petitioner, a social worker, through a Public Interest Litigation.

The court said that notwithstanding the comprehensive provisions contained in the Water (Prevention and Control of Pollution) Act 1974 and the Environmental Protection Act, 1986, no effective steps were taken by the government to stop the grave public nuisance caused by the tanneries at Jajmau, Kanpur. In these circumstances, it was held that the court was entitled to order the closure of tanneries unless they took steps to set up the treatment plants.

In a significant judgement in *Indian Council for Enviro-Legal Action Vs. Union of India*<sup>40</sup>, the Supreme Court has held that if by the action of private corporate bodies a person's fundamental right is violated the court would not accept the argument that it is not "State" within the meaning of Article 12 and, therefore, action cannot be taken

against it if the court finds that the government or authorities concerned have not taken the action required of them by law, and this has resulted in violation of the right to life of the citizens. It will be the duty of the court to intervene.

In another case in *M.C. Mehta Vs. Union of India*<sup>41</sup>, the Supreme Court ordered the shifting of 168 hazardous industries operating in Delhi as they were causing danger to the ecology and directed that they be relocated in the National Capital Region as provided in the Master Plan for Delhi. The Court in this case gave necessary specific directions for the protection of the rights and benefits of the workmen employed in these industries. The court also directed these industries to close down with effect from 30-11-1996.

In *Vellore Citizen's Welfare Forum Vs. Union of India*<sup>42</sup>, the Petitioner, Vellore Citizen's Welfare Forum, filed a Writ Petition by a Public Interest Litigation drawing the attention of the court towards the pollution caused by enormous discharge of untreated effluent by the tanneries and other industries in the State of Tamil Nadu. It was said that the tanneries were discharging untreated affluent into agricultural fields, waterways, open lands and rivers rendering the river water unfit for human consumption, contaminating the subsoil water and had spoiled the physico-chemical properties of the soil making it unfit for agricultural purposes. The court in this case directed the closure of these industries unless they install pollution control devices. All the tanneries are required to obtain the consent of the concerned Board for further operations with effect from December 15, 1996. The court imposed pollution fine of Rs. 10,000/- on each tannery. The money shall be deposited in the "Environmental Protection Fund" and shall be listed for compensating the affected persons and also for restoring the damaged environment.

Again in another case *M.C. Mehta Vs. Union of India*<sup>43</sup>, The court has expressed the view that, "having regard to the need for protecting and improving the environment which is considered a fundamental duty under the Constitution, it is the duty of the central government to direct all the educational institutions to teach atleast one hour a week lessons relating to the protection and improvement of the natural environment including forests, lakes, rivers and wildlife in the first ten classes."

Further, the court has come out with doctrines like 'precautionary principle' and the 'polluter

pays principle' in remedying the damaged environment and by punishing the guilty. To achieve sustainable development, The court has suggested constituting special Bench called 'Green Bench' to deal with the environmental cases as it will be in a better position to monitor these matters.<sup>44</sup>

In this way the efforts of the highest court in environment pollution control through public interest litigation are indeed laudable when the Legislature is lagging behind in bridging the lacuna in the existing legal system and the Executive is not well equipped to meet the challenge.<sup>45</sup> It is the fundamental duty of one and all, to protect and improve the environment not only for us but also for the future generations. It is the right time to know something about the environment including the various judgements of the highest court as under Article 141 of the Indian Constitution the law declared by the Supreme Court shall be binding on all courts within the territory of India. Further, under this Article the law declared by the Supreme Court is binding on the State and its officers and they are bound to follow it.<sup>46</sup>

Environment law plays an important role which relates to every individual, society, state etc. It is time to save the planet earth from a few greedy persons. Teaching Environment Laws is indeed as important as our very survival.

#### Notes and References

1. See the Circulars No. LE (Cir. No. 4/1997) dated 21st October, 1977 and Cir. No. LE-1/1998 dated 2.1.1998.
2. *Ibid*.
3. See Subject Serial No. 18.
4. Hohfeld. *Jural Relation of Rights & Duties*.
5. H.N. Tiwari. *Environment Law*.
6. Pravin Seth. *Environmentalism, Politics, Ecology & Development* P. 19.
7. *Ibid* P. 20.
8. Jennings. *Some Characteristics of the Indian Constitution*, 1953, P. 56.
9. *Stockholm Declaration*, 1972, Principle 1.
10. *Ibid* — Principle 2.
11. *Ibid* — Principle 4.
12. *Ibid* — Principle 6.
13. *Ibid* — Principle 7.
14. *Ibid* — Principle 8.
15. *Ibid* — Principle 11.
16. *Ibid* — Principle 12.



17. Part IV of the Indian Constitution.
18. See Sec. 10 w.e.f. 3.1.1997 (42nd Amendment Act)
19. See Sect. 11 of the 42nd Amendment Act 1976 w.e.f. 3.1.1977.
20. *Hindustan Times*, June 15, 1992.
21. *Ibid* — June 16, 1992.
22. *Rajasthan Patrika*, April 9, 1995.
23. Mahesh Mathur. *Legal Control of Environmental Pollution*. P. 39.
24. See List II — State List SL No. 17 of VII Schedule under Article 246 of Indian Constitution.
25. Art. 252 . Power of Parliament to legislate for two or more states by consent and adoption of such legislation by any other state.
26. See Section 4 of Water (Prevention and Control of Pollution) Act 1974.
27. See Rule 11 of Water (Prevention & Control of Pollution) Rule 1975.
28. See Section 37 A Supra at SL No. 26.
29. Section 49 : Cognizance of offence.
30. Section 3 of Air Act 1981 : The Central Pollution Control Board (for Preventing and Controlling Air Pollution) constituted under Section 3 of the Water Act 1974, shall without prejudice to the exercise and performance of the powers and functions under that Act for the exercise the powers and perform the functions of the Central Pollution Control Board for the Prevention and Control of Air Pollution under this Act under Section 4 of the Air Act 1981. Similar tasks to prevent control the air pollutions have been entrusted to State Water Boards.
31. As quoted in *Environmental law and policy in India* by Armin Rosenzanz & others P. 193.
32. See the Statement of objects and reasons of Environmental (Protection) Act. 1986.
33. Section 16 : deals with cognizance of offence.
34. Judicial Review is the basic structure of Indian Constitution.
35. See Articles 32 and 226 of the Indian Constitution.
36. AIR 1991 SC 420.
37. (1985) 2 SCC 431.
38. (1986) 2 SCC 176.
39. (1987) 4 SCC 463.
40. (1996) 3 SCC 212.
41. (1996) 4 SCC 750.
42. (1996) 5 SCC 650.
43. AIR 1988 SC 1037 at Pp. 1045, 1046.
44. *Supra* at No. 42.
45. J.N. Pandey. *The Constitutional Law of India*. P. 203.
46. See T.K.N. Rajgopal Vs. T.M. Karunanidhi (1972) 4 Sec. 267.



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# Privatisation of Professional Education

P.V. Gupta\*

There has been phenomenal expansion in the facilities for technical and professional education, such as, engineering, management etc. The expansion in engineering education started way back in 1960 onwards, while that in management education, it started some seven-eight years ago. However, in spite of the tremendous growth in such facilities, it does not meet the requirements of industrial and business growth in the country both in quantity as well as in quality, particularly in the new environments of liberalisation and globalisation. Similarly, the expanded facilities do not meet the demands of the ever growing number of students aspiring to do a course in engineering or management. To meet the expanding needs of the industry and the aspiring students, there is still a great scope for more technical, management and such other professional institutions.

In the expanded technical and professional education, we have today a large number of privately run and self-financed institutions operating in different parts of the country. This is as it should be, because the establishment of a professional institution requires huge capital investments and annual recurring expenditure and therefore, if the private organisations are encouraged to set-up institutions, the public funds so saved can be used for expansion and maintenance of the primary and the secondary education by the state and the central governments. Not only will the entry of private organisations (such as corporate world) into education being investments into a socially desirable area, it will also make education more relevant (industry and job oriented) and bring in professional management of education.

## Some Myths Regarding Private Institutions

There are a few myths in the public and the government regarding private institutions. One such myth is that private institutions exploit the students and their parents by levying huge fees and other charges. However, it is unfair to compare these fees with those being charged in the public funded institutions, where the fees are un-realistic, un-economical and have remained almost unchanged over the past four decades.

The public institutions entirely depend upon the govt. funds which are just sufficient to meet the salaries of the teaching and non-teaching staff and are absolutely insufficient for the development of libraries and laboratories and replacement of the obsolete equipments, furniture and repairs (even white-wash) of the buildings. In contrast the private institutions

have to generate their own resources. One cannot expect the managers/educational trusts of these institutions to meet all these expenses from their coffers and all the times.

For long, private entrepreneurs such as the corporate world have shied away from education and yet criticised Indian universities for turning out unemployable graduates or for curricula that bear no relationship to the needs of the Industry. Their entry into the area, even for profits should be welcome for it should help to re-dress some of these problems of educational system.

The second myth is that the standard of professional education in the private institutions is far from being satisfactory. Has any comparative study been made of the infrastructure and academic standards prevalent in the public funded and the private institutions? The author has had the opportunity of working as the Head of two premier technical institutions — one managed by a private trust and the other jointly funded by the state and central govt. He can say with full responsibility that standards of teaching, discipline and performance of teachers were far more superior in the private institution than in the government funded institution. Do we require any magic to understand the working in any government set-up and the working in any private set-up? Of course, all private organisations are not good and similarly all public organisations are not bad. It is here, where the role of the statutory bodies like AICTE and UGC should come into play. They should, on continuous basis, monitor the working and performance of all educational institutions and publish their reports. But such an exercise should be honest one. Can the public expect this from these two statutory bodies? Once this is done, bad institutions will meet their natural death in the competition.

The private organisations have done wonderfully well in school education and also in computer application education. It is largely due to achievements of such organisations that in the field of computer (software) education, India is a force to reckon with. Similarly, our MBA graduates from many such organisations are working in MNCs all over the world. In fact many private Business Schools have been rated higher than public funded B. Schools according to a Study conducted by Business Today & reported in its May 22, 1998 issue. These institutions have established beyond doubt that there is willingness of the students to pay for quality education.

## Collaboration with Foreign Universities

In the recent years, some private institutions have started collaborating with foreign universities in running degree programmes (say BBA, MBA etc) of the

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collaborating university whereby the students in India are coached according to their syllabi, their strict control and standards and are then prepared for the exams of these universities. The continuous assessment of the student's performance and the semester/final evaluation of the examinations are monitored, controlled and even conducted (wherever necessary) by the university. These private institutions in India function as teaching institutions very much similar to the teaching institutions affiliated to Indian universities. Some authorities have come strongly against such practices. One fails to understand this. There is a need to consider this issue with all the seriousness it deserves. Many of us in institutes of higher learning got our degrees from foreign universities by going abroad and studying there and our degrees have been honoured. What is wrong if the same studies are conducted in India in accordance with the syllabi, norms and standards of the foreign university? A degree of the same university does not get devalued if studies are done in India unless we have no faith in our own teachers. Look at the dichotomy that if a teacher goes abroad for teaching, he is noted as very good but he is bad when he teaches in India and like-wise vice-versa. Similarly, the degree of a university in London is good if obtained after studying there, but is bad if obtained after studying in India. The logic for such a view-point is not understandable.

The universities all over the world (even some in our country) are trying to reach students everywhere through internet. Can anybody stop students (in India) from following this mode of education? Or, will anybody say that degrees of our own universities are no good if earned through distance or open learning or will anybody decry the efforts of Indian open universities trying to reach students in under-developed, developing or even the developed countries. In the world of today, we should think global. We must allow professional education to become global, encourage our good universities and institutions to run courses in other countries and like-wise allow foreign universities to enter our soil in areas where we require trained professional manpower and/or improve the quality of education. Once this open door policy is permitted, our universities and our academics will have to come out of their protected shells.

There is another very strong reason in allowing entry of the foreign universities in the Indian technical and professional training. Not only will the students have access to world class education in India itself, it will put a curb on un-healthy practices prevailing in some of our universities. According to the latest directive of AICTE, if a private educational society/trust has to start a course in view institution, it is required to get NOCs from the affiliating university (normally the one in whose geographical area the institution is going to be located), the state gov-

ernment, the Regional Officer of the AICTE and then finally from the AICTE. Those who have been in this game know how difficult it is to get these NOCs and affiliations. This is not the way to encourage the private organisations to come forward for setting-up private institutions.

Our main aim has to be expansion of technical and professional education with high academic standards. Excellence in general education and more so in higher professional training should motivate us. To achieve these objectives, privatisation definitely helps and this has been well established. In this regard, collaboration with foreign universities should be assessed and let the committee of officials of UGC, AICTE and the Ministry of HRD, already set-up for said purpose, come out with guidelines for such collaboration. If a private educational trust/society affiliated to a state university wants to expand their institutional network in the neighbouring states, there should be provision for this expansion. In this context there is need to re-consider the geographical jurisdiction of the universities. The bill for establishment of Private Universities is pending since 1994. It should be brought before the Parliament for its approval at the earliest. A resource strapped India can't afford an inefficient state funded system of higher education. We have been thinking of liberalisation and de-bureaucratization in every other sector but we appear to be going in the opposite direction in the matter of education. Why should any entrepreneur or organisation put money into an enterprise which becomes totally subservient to educational bureaucracy in respect of recruitment and control over staff, fees, curriculum and syllabi and even admissions etc. There is urgent need for a thorough review of laws and procedures hindering private participation in education. We will have to move away from the culture of uniformity and control and encourage quality, innovations and diversity. Why one may ask, salary of teachers should be decided by govt. and be the same across the length and breadth of the country quite irrespective of income levels of participants, the financial strength of employing institutions, the cost of living at various locations and above all performance of teachers. The same applies to fee structuring where there should be an appropriate formula for assigning weights to the per unit expenditure incurred on different sub-sets of training and the quality of services rendered.

Societies, trusts, corporate organisations having proven achievements in education, industry, business should be encouraged to start institutions & universities. They will bring a climate of competition and thus help in improving academic standards. This will infuse new experimentation in our educational system and may help our universities from further slogging and deterioration. This may curb inefficiency, complacency and corruption. □ ;



# The March of Civilisation

Dr. N.C. Nigam Vice Chancellor, Roorkee University delivered the Convocation Address at the Fifth Convocation of FORE School of Management, New Delhi. He said, "As our ability to communicate improved through the development of languages and scripts, a formal system of education, the print and multimedia, and the advances in the information technology, the march of civilisation has accelerated at an exponential rate." Excerpts

## Management Functions — Evolution as an Academic Discipline

The elements of management functions have existed since the emergence of living organisms on earth. The colonies of animals, including homo sapiens, birds bees and ants exhibit remarkable organisational behaviour. Most of it is genetically inherited, and the rest is acquired through the learning process. The human society made a break from the animal existence through three attributes — I like to call the 3Cs: curiosity, creativity and communication. Human civilisation progressed through a cumulative process in which each generation inherited a body of knowledge and skills, augmented them with its own contributions, and passed them on to the next generation, through communication, in a perpetual relay race. As our ability to communicate improved through the development of languages and scripts, a formal system of education, the print and multimedia, and the advances in the information technology, the march of civilisation has accelerated at an exponential rate.

For a long time in human history, life was simple and centered around isolated settlements. With the passage of time, the life style changed progressively from nomadic to agricultural to industrial, and in the recent past to a complex global order. Until about the mid-

dle of this century, a few men with natural talent for organisation and entrepreneurship provided the leadership in managing human affairs, including business and trade. The management functions basically relied on a simple dictum, attributed to Thomas Edison, in a remarkable book *Augustine's Laws* : "There is a better way — find it." During this phase, management remained an empirical and experiential activity lacking in rigour and robustness to qualify as an academic discipline worthy of a place in institutions of high learning. Some aspects of general management were covered in courses leading to degrees in Commerce, Social Sciences and Industrial/Production Engineering. With the emergence of modern industrial society, the need for management professionals with a sound academic background became imperative. The schools of business administration and management were established around the middle of this century, first in United States, and later in other countries. In India, the management education took roots in the 70's, with an explosive expansion in the 90's.

The general management programmes being offered in most institutions, at present, cover specialisations in finance, personnel and marketing. Quantitative methods, such as, econometrics and psychometrics, system dynamics cybernetics, programming

methods, informatics and stochastic modelling are included in the curriculum to provide tools for dealing with complex systems. With increasing impact of science and technology in every aspect of human endeavour, programmes with a focus on management of technology have emerged. The Sloan School at the MIT was the first to organise such a programme in 50's. IITs, IISc, University of Roorkee, and recently established institutes of IT management offer programmes with focus on technology and systems. IIM's and other schools of management have supplemented their courses to prepare the students to deal with pervasive science and technology interface. The private initiative in management education is a welcome development.

## Emerging Global Order

International trade and commerce have existed for centuries. However, during the past decade, or so, the world of trade and commerce has undergone a revolutionary transformation. The information revolution and spectacular progress in tele-communication and transportation systems, have shrunk the world to a scale, where the time honoured imperatives of physical proximity have lost their relevance. The emerging global order is increasingly characterised by : access to global markets, global finance, global resources, including human resource, and global manufacturing and R&D. In the face of global competition, decisions on where to source the raw materials, where to manufacture, assemble and sell, are not confined to national boundaries. Following observation by the President of Northern Telecom, succinctly sums up the essence of the present phase of globalisation :

"Leadership in international business arena now being born

will mean incorporating the systems, the people, and the presence that provide global service to customers with consistency, quality and speed.

The new direction of business success is clear. It means bold and effective responses to changing business environments, with every strategy suffused with a global perspective and designed with world mind.

It is no longer adequate to be just a Canadian company or an American company".

The advances in science and technology have made this transformation possible, and will continue to determine the shape of things to come. To survive and succeed in this milieu, it is necessary to achieve and maintain global standards in cost, quality, safety, environment, response-time and service. Here again, science and technology provide the cutting edge. Success of nations and corporations is determined largely by their ability to develop better products and processes, through sustained technological innovation. A break-through in science, leads to new technologies which form the basis for the introduction of new and improved products and processes.

The past four decades, beginning in 50's, stand out as a period of outstanding achievements in areas such as : Aviation, Space, Computers, Information Technology, Communications, Biotechnology, Robotics, etc. The leadership in technology which was confined to a few countries in America and Europe, has now spread to several countries, especially Pacific-rim countries, who have assumed leadership in several emerging areas through successful integration of science and technology with industrial development.

Instant multimedia communication has transformed the world of business. It is fast moving towards information based corporate structures — learner, flatter with larger span of control. The corporations are being re-engineered to become adaptive, learning organisations with a short response time. The multinationals with offices in New York, Bombay and Tokyo now work by a global clock which has 3 working days in 24 hours. A world class infrastructure is now a must to be a part of the global economic order.

90's have ushered an era of revolutionary changes in the business environment across the world. In 60's the corporate battles were for a niche market. Corporations focused on a dominant share in a particular niche and operated in a 'win-win' situation. In 90's, global order has been transformed to a 'win-lose' situation, in which battles are not for niches but 'Head to Head' as described by Lester Thurow in his book with the same title. The world is now divided into three major trading blocks — NAFTA, EEC and ASEAN countries. These blocks are locked in trade battles in seven generic industries : Microelectronics, Telecommunications, Computers and Software, Aerospace, New Materials, Robotics, and Biotechnology. Science and Technology provide the cutting edge for corporate leadership in these areas, and involve large investments and high risks.

#### **The Indian Scene**

For a long time Indian business was confined to trading. Around the middle of this century we entered manufacturing mostly under licence; and later through joint ventures. We now have a fairly large manufacturing base with some notable indigenous initiatives. A few large Indian Corpo-

rations have visions of becoming MNC's.

In July 91, India took the momentous decision to become a part of the global economy. A series of macro economic measures and industrial policy initiatives were introduced to bring about the transition from a protective regime to a global competitive environment. These include : liberalisation, privatisation, relaxation of controls, such as MRTP, FERA, and other steps to attract foreign direct investment and boost export. During the 80's, India had made sporadic efforts to move in this direction. However, the precarious BOP situation prevalent in 91, left no choice for the new government but to take a plunge.

India's share in world trade is primarily in non-value added natural resources. Our per capita GDP has doubled from 1960 to 1993, whereas during the same period it tripled in China and increased 14-fold in South Korea. In the wake of the opening up of our economy, since 91, FDI has recorded a quantum jump, but the MNC investments are primarily in the consumer and financial sector. At this stage, most MNC's are feeling the water. Investments in manufacturing and infrastructure may come, if consistency and stability of India's policies are firmly established.

#### **Knowledge : Science and Technology**

Technology innovations have remained at the core of business since the beginning of the industrial revolution. For a long time, technology was simple and centered around creative individuals — the inventors who were guided by intuition rather than formal scientific knowledge. To quote Eric Ashby in his seminal essay on Technology "The Industrial Revolution was accomplished

by hardheads and clever fingers. In this rise of British industry, universities played no part whatever." Major technological breakthroughs were few and far between, but each break-through provided business opportunities for a long time. The competition was limited and local. In this environment, a good product, or a process, was good enough to succeed in business. The proverbial dictum that if you invented a good mouse-trap, the whole world will make a bee line to your door representing the guiding corporate strategy.

Over the past three decades, however, technology has changed the way world does business. Technology is now increasingly based on :

- fundamental understanding and scientific knowledge :
- short "half-life" due to rapid advances in knowledge;
- interdisciplinary cooperation between experts and institutions;
- complex large-scale integration;
- large investments and high risks; and
- feedback from the 'market-place', i.e. customer orientation.

In this milieu, corporate success belongs to the companies, who are able to build image and brand names through a sustained track record of being the first in the market with product attributes, such as, cost, quality and service. Progressively, technology has become a strong determinant for realising these attributes through R&D, and a pervasive innovative corporate environment. Successful products emerge from generic technological competence built over years on the edifice of basic sciences, skills of the designers and shop floor workers, detailed engineering, and incremental improve-

ments through market feed back. Excellence in manufacturing and new materials are among the key areas for assuming leadership in frontier technologies.

### Options and Challenges for Indian Corporations

In the emerging global order Indian companies have two options. They may become a global platform for MNC's or strive to become a global partner. To companies which operate as a global platform, MNC's will provide the bulk of funds and technology, but exercise management control. Singapore and Malaysia have adopted this strategy. A global partnership with MNC's is on the other hand, based on the "principle of reciprocity". Under this arrangement, companies may receive finance and technology from MNC's but leverage these through indigenous R&D and finance, to become a multinational in their own right. Japan, Taiwan and South Korea adopted this strategy. In Japan for every dollar spent on import of technology, seven dollars are spent on indigenous R&D and technology absorption.

A major effort is required to pursue the second option. It will require synergy of academic and industrial research, to develop new products and processes. Indian companies aspiring to become multinationals must strengthen in-house R&D efforts, and act as a stakeholder of the research conducted in academia and in national laboratories. Without sustained concurrent effort in these directions, the strategy of acquisition of technologies from foreign MNC's, will not lead Indian companies towards the goal of a global partnership.

### Challenges for Professional Managers

In the emerging technology-led global order professional man-

agers need competencies and insights beyond the domain of general management. To be effective professional managers of the future :

- must have an international outlook and a global perspective encompassing : an understanding of the culture, socio-political environment, and ability to coordinate and organise people within the boundaries of a single firm that spans borders of several countries;
- must have an understanding of the nature of science and technology, their life cycle, and pervasive influence on all aspects of corporate functioning and the ability to manage the interface;
- must have competence in information-based management, that is, the ability to give relevance and purpose to data through analysis, diagnosis and synthesis. He must be an effective communicator to act as a "monitor", "disseminator" and a "spokesman" within and outside the corporation;
- must have the ability to incorporate and manage organisational flexibility. As observed by Professor Robinson of MIT : "Contingency plans, and ability to switch strategies and resources quickly and efficiently, will mark the international corporate survivor"; and
- must develop the ability to manage, both the tangible and intangible multidimensional domains defined by time, space and aesthetics.

Successful future managers will be life-long learners, who are able to integrate specific management skills with the qualities of leadership and humanistic values. □



**M.T.E. Society's**  
**WALCHAND COLLEGE OF ENGINEERING,**  
**VISHRAMBAG, SANGLI (M.S.) 416 415**  
**(Affiliated to Shivaji University, Kolhapur)**

Applications are invited for the following posts.

A) Principal : 1 Post (Open)

B) Other Posts :

Sr. No.	Department/ Subject	Professor		Asstt. Professor		Lecturer	
		Open	Reserved	Open	Reserved	Open	Reserved
	U.G./P.G.						
1.	Civil Engg. (U.G.)	—	—	—	—	—	@ 1 ST(II) @ 1 VJ(A)(I)
2.	Mech. Engg. (U.G.)	1	1 S.C.(I)	—	—	—	—
	1. Heat Power (P.G.)	—	—	1	—	—	—
	2. M/C. Design (P.G.)	1	—	1	—	—	—
3.	Applied Mech. (U.G.)	1	—	—	—	—	—
	(P.G.)	1	—	1	—	—	—
4.	Elect. Engg. (U.G.)	1	1 S.C.(I)	—	—	—	@ 1 ST(I) @ 1 VJ(A)(I)
	1. Power System (P.G.)	1	—	—	—	—	—
5.	Electronics Engg. (U.G.)	—	—	—	—	—	@ 1 SC(I)
	(P.G.)	—	—	1	—	—	—
6.	Comp. Sci. & Engg. (U.G.)	—	—	—	@ 1 SC(I)	1	@ 1 SC(I) 1 ST(I)
7.	Physics (U.G.)	—	—	—	—	1	—

**Polytechnic Wing-1999**

Sr. No.	Department	Head of Department		Lecturer	
		Open	Reserved	Open	Reserved
1.	Mechanical	1	—	—	@ 1 ST(I)
2.	Electrical	—	—	—	@ 1 ST(V) @ 1 SC (II) @ 1 SC(I) @ 1 OBC(I)
3.	Electronics	—	—	—	—
4.	Applied Mech.	—	—	1	—
5.	Mathematics	—	—	—	@ 1 SC(I)

6. Training and Placement Officer (Under World Bank Project) — 1 Open

**Note :**

- @ The post is advertised under 'Special Recruitment Drive' for filling backlog of reserved posts. Roman figures in the brackets show number of times of advertisement.
- Reservation for VJ NT categories are internally transferable. If VJ(A) candidates are not available, the posts are to be filled in by available NT(B), NT(C) & NT(D) category candidates.
- If particular reserved candidates are not available, then open candidate/s will be temporarily appointed for one academic year only. Such appointed candidates will have no claim or legal right on the said post if particular reserved candidates become available during the next year/s.
- Reserved class candidates who are domiciled out of Maharashtra State will be treated as open category candidates.
- Reserved candidates are advised to send a copy of their application to "Dy. Registrar, Special Cell, Shivaji University, Kolhapur-416 004."
- Following posts are to be filled in from available female candidates.

Cadre	Open	Reserve
Professor	2	—
Asstt. Prof.	1 (Except Electronics)	—
Lecturer	—	2 (Except Electronics)

If Female candidates are not available the post will be filled in from male candidates of the respective category.

- Experience, Educational Qualifications, Pay Scales and Service conditions will be as per rules of Shivaji University, Kolhapur/The Director of Technical Education, Mumbai. The details regarding Educational Qualifications will be supplied to the candidates on demand.
- Apply giving full particulars within a month from the date of publication of this advertisement to the undersigned in the prescribed application form which can be had from college office personally or by post sending self addressed envelope of size 10 cm x 25 cm with stamps of Rs. 4/- duly fixed.

07/07/1999

I/C PRINCIPAL

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## CAMPUS NEWS

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### Modi Award for UR Rao

Eminent scientist, Prof. U.R. Rao, has been chosen for this year's G.M. Modi Award for Science for his contribution in the field of science and technology. Former chairman of the Space Commission, Prof. Rao is a distinguished professor at Dr. Vikram Sarabhai Space Centre. The first Indian satellite 'Aryabhata' was designed under his guidance.

This was announced by Mr. Satish Kumar Modi, president of the governing body of the Gujar Mal Modi Science Foundation.

Winner of 'Padma Bhushan', Prof. Rao is an internationally acclaimed space scientist who has made contribution to the development of space technology in India and its extensive application to communication and remote sensing of natural resources.

The award carries a cash component of Rs. 1.1 lakh, a silver shield and a scroll of honour. The award was instituted in 1988 in the memory of Rai Bahadur Gujar Mal Modi and is given annually to an individual for demonstrating excellence and innovation through outstanding research and in providing leadership in the development and promotion of science and technology.

### MoU on Twinning Programme

A memorandum of understanding is proposed to be signed by Pondicherry University and Loyola College to start a twinning programme from this academic year.

The twinning programme is

similar to a correspondence course, though more intensive with around 90 to 120 days of classroom sessions of two hours each. In a conventional long distance education system, the personal contact programmes were only extended for about 10 days, according to Dr. V.T. Patil, Vice Chancellor, Pondicherry University.

Through the collaborative effort of both educational institutions, students residing in Chennai and its neighbourhood will gain a Pondicherry University degree in courses like Computer Applications, Foreign Trade, Marketing Management, Banking and Finance among others. In this manner, it was hoped to extend various streams to working people by taking advantage of evening classes at Loyola College. The fee structure will be between Rs. 8,000 and Rs. 10,000 per year, not inclusive of the examination fee. Economically weaker students could be considered for a 25 per cent concession in course fee, restricted to 10 per cent of the total number enrolled for the various streams. The selection of students will depend on their performance in the entrance test, said Dr. S. Ignacimuthu, Principal, Loyola College.

The staff pattern and lectures will be administered by Loyola College with a large guest faculty. However, the examination will be conducted by the Pondicherry University.

Dr. Patil highlighted that the University had signed MoUs with institutions in 15 countries, including half a dozen in France. This venture would cater to a large section and was formulated after consider-

ing the various aspects of higher education. The professionally oriented courses were also expected to increase job opportunities, he said.

### New Engg. Colleges for Karnataka

Government of Karnataka is reported to have accorded permission for five new engineering colleges from this academic year.

The new colleges are : Reddy Sangha Engineering College at Anekal, the Kamma Sangha Engineering College at Bannerghatta near Bangalore, the Kodava Sangha Engineering College at Ponnampet in Kodagu; the M.G. Charitable Trust Engineering College at Banaswadi in Bangalore, and the Basavakalyan College of Engineering at Attur in Bidar district.

The Minister for Higher Education, Mr. B.A. Mohideen, said that the All-India Council of Technical Education (AICTE) had already given clearance to these colleges, and they would start functioning from the coming academic year.

He said there was a proposal to establish as many as 15 colleges for MBA (Master of Business Administration) and Master of Computer Applications during the year, and the Government was awaiting permission from the AICTE.

Following a demand for a Bachelor's course in Computer Application, the Government had decided to permit the Karnataka and Bangalore Universities to start courses in this subject.

The Minister said the government had decided to start a women's polytechnic at Gulbarga soon and the details had already been worked out.

The government was also planning to start mini polytechnics exclusively for women, and courses including secretarial practice, computer application and other related subjects would be introduced, he said.

Stressing the need to establish one more Indian Institute of Technology (IIT), Mr. Mohideen said the Government had drawn up a proposal to start an IIT at Dharwad, and the proposal had been sent to the Ministry of Human Resource Development for permission and assistance in this regard.

On the increase in the number of engineering colleges in the State, he said there was need for more engineering colleges. The number of engineering colleges in the State was 71 as against 100 in the neighbouring Andhra Pradesh and 125 in Maharashtra.

He said of the 71 engineering colleges, three were Government colleges, nine aided institutions, two university colleges, four evening colleges, and the remaining 53 were private colleges.

### **TANUVAS Plans Vocational Courses**

The Tamil Nadu Veterinary and Animal Sciences University (TANUVAS) plans to start commercial ventures with the objective of generating internal resources, said Dr. R. Prabhakaran, Vice Chancellor, TANUVAS.

As part of its commercialisation plans the TANUVAS proposed to establish farms on commercial basis as pilot projects, he said.

Initially a dog breeding unit and cross-bred cow farm were planned to be established in Kattupakkam. Similarly, a fresh water prawn seed unit would be established in Tuticorin within the next two months, he said.

The commercialisation move

would also help the university students to be trained in various aspects of running and maintaining commercial ventures, he observed.

Dr. Prabhakaran said the university had ventured to give a thrust on vocationalisation of its programmes and had planned to conduct short-term courses on post-harvest technology, dairy product processing, value added fish and meat products etc.

The programmes, to be conducted at the university's Institute of Food and Dairying Technology in Poduvalli in Red Hills, would be held for the benefit of school drop-outs.

Last year the university had conducted a few such programmes, with financial assistance from the NABARD, drawing good response from the youth. Hence the university had decided to organise such programmes on a larger scale this year, he said.

He claimed that the TANUVAS was the only "100 per cent computerised" university in the country with the entire staff being made computer literate.

The university had provided computers to all its 16 training and research centres and three farmers training centres, located in various parts of the State, and all these centres would be linked with the university through a computer network. All the colleges of the university had already been linked under the network. The networking of the training centres and the university would ensure quick transfer of information and technology to the field level staff and farmers.

The World Bank had recently sanctioned Rs. 15 crores for the university for implementing a human resource development project. The World Bank had already sanctioned Rs. 23 crores, a few years ago, for the project envisaging faculty devel-

opment, improvements in infrastructure, modernisation of library and laboratories and computerisation.

Under the faculty development programme, a total of 120 faculty members from the university were to undergo training in various foreign educational institutions.

Forty-five faculty members had already undergone the training and another batch of 60 members was likely to be sent abroad for the training shortly. The university library in Chennai had been fully automated and the system would be commissioned within a month. Under the World Bank-aided project Rs. 5 crore each had been earmarked for modernisation of libraries and laboratories. The project would be completed before December 2000, he said.

Dr. Prabhakaran also indicated that the university was likely to submit plans for phase-II of the World Bank aided project for undertaking follow up measures. However, the proposal was at the planning stage still, he said.

The TANUVAS had recently invited a team of six foreign experts to study and suggest improvements to the extension activities of the university. Based on the suggestions given by the experts improvements were being made in the extension services, he said.

The university had also planned to conduct specialised training for students who had completed the BVSC course to provide them necessary guidance on taking up employment and other entrepreneurial activities, Dr. Prabhakaran said.

### **Guru Kashi Varsity**

Dr. Jasbir Singh Ahluwalia, Vice Chancellor, Punjabi University, is reported to have said that Guru Kashi University at Talwandi Sabo



would start functioning within two years. He said, by 2001, the university would start conducting examinations.

He pointed out that the university would be developed in phases. In the first phase three centres of information technology, religious studies and modern management with special emphasis on rural management would be developed. The development of the first phase would initiate the development of the second phase which would include different courses.

When asked how Punjabi University would arrange funds for the new university, Mr. Ahluwalia said that Internal reapportion exercise of funds would be carried out for generating funds for this task. He added that NRIs would also be approached for it.

He disclosed that the Chief Minister, Mr. Parkash Singh Badal, would soon lay the foundation stone of the Information Bhavan in the Guru Kashi University complex. About Rs. 5 crore would be spent on the bhavan and Rs. 1.75 crore had been arranged for its construction.

He said under the new policy education would be taken to rural areas from the cities.

Dr. Ahluwalia disclosed that the University would take up the matter of recognition of pharmacy course of Guru Kashi College, Talwandi Sabo, and law course of local regional centre with the Pharmacy Council of India and the Bar Council of India. He said that local regional centre would not be closed.

### **On-Line M.Sc. Programme**

The Zee Education and Kurukshetra University have joined hands to provide job-oriented courses.

Ms. Uma Ganesh, chief executive officer of the Zee Education,

said the two organisations had entered into a strategic partnership to provide Bachelor of Computer Application course across the country.

The course will give students exposure to the latest in computer and Internet technologies. The programme will also adopt state-of-the-art education delivery methods which included on-line learning facility, video support and projects, Ms. Ganesh explained.

The programme, to be offered through the Zee Education's ZED Career Academies, will be timely solution to the yawning gap between supply and demand of seats in regular colleges and create employment opportunities in the booming software sector, she said.

Dr. M.L. Ranga, Vice-Chancellor of the university, said the collaboration would open a new chapter in the vocational education in the country.

The partnership will bring together the best of education, content, design, delivery and technologies of both the organisations which would lead to meaningful education and create job opportunities for the young, he hoped.

There was a pressing need for more such tie-ups between the university and the industry because it will help people at large, he suggested.

Mr. L.C. Gupta, Director of Distance Education in the university, said there was an acute shortage of seats in major universities in the traditional learning system, including Delhi University.

Against 38,000 seats in regular courses in Delhi University this year, there were 75,000 students who had cleared class XII examinations in the Capital alone. Besides, a large number of students from the neighbouring States also sought admission to the university, the Director said.

Through the collaboration between the Zee Education and the university, it will now be possible to extend opportunities of acquiring degrees and diplomas through its nationwide network of learning centres for thousands of students interested in professional education, computer and management, he said.

The two organisations have also planned to set up a ZED Career Academy on the university campus and colleges affiliated to it to enable students to acquire professional skills in computer, e-commerce and Internet along with their regular education.

Additionally, they will offer country's first on-line M.Sc. programme in software for which admission will start next year. The university will provide content for the programme and the Zee Education's Internet development team will be involved in the design and delivery of courses which will be made available all over the country, according to Ms. Ganesh.

### **Chair in Greek Studies**

The Government of Greece is reported to have decided to institute a Chair in Classical Greek Studies in the School of Language, Literature and Culture Studies of Jawaharlal Nehru University (JNU). It is the first Chair to be endowed by the Greek Government in Asia and fourth in the world after Harvard, Macgil and Missouri Universities.

The Jawaharlal Nehru University is now in the process of setting up a major Indo-European Studies Programme involving classical studies built around Greek, Latin, Hebrew, Sanskrit, Prakrit, Pali, Persian and Arabic and a beginning has been made with Greek.

The Ambassador of Greece, Mr. Yennis-Alexis Zepos, had

taken keen interest in the proposal and the Greek Government accorded a high priority to the JNU initiative.

Under the agreement, the Government of Greece has made an endowment of \$ 1,00,000.

### **International Congress for Stereology**

This is the era of Information Technology (IT). We are now witnessing second revolution in IT i.e. image oriented information processing. Image processing has reached a stage of wide spread availability. There are a host of applications where image processing is making a major impact. To mention a few, machine vision, motion analysers, navigation, image description, recognition, dynamic pattern recognition, image analysis etc. In order to review the state of the art in this field International Society for Stereology (ISS) is organising twin International meetings in November 1999.

The 10th International Congress for Stereology (ICS) will be held at Melbourne, Australia during November 1-4, 1999. The Congress is held once in every four years.

Immediately following, the 10th ICS Satellite Conference on Image Analysis in Materials and Life Sciences (SCIAMAL-99) will be held at Indira Gandhi Centre for Atomic Research, Kalpakkam, during November 7-10, 1999. The focus of the Satellite Conference is on Image Processing and Analysis, Applications in Materials Science and Biomedical Science, Pattern Recognition, Confocal Microscopy etc. As part of the Satellite Conference IMAGEX-99, a technical exhibition on Image Processing and Microscopy Equipment will be held.

Also a two day Course on Quantitative Microscopy is being organised. Experts like Prof. H.J.G. Gundersen, Prof. A.M. Gokhale, Prof. B. Pakkenberg, Dr. G.F. Vander Voort, Dr. K.J. Kurzydowski and Prof. L. Wonjar are expected to participate.

Further details may be obtained from C. Babu Rao, Convenor, SCIAMAL-99, Division for PIE & NDT Development, Indira Gandhi Centre for Atomic Research, Kalpakkam-603 102. Fax : +91 4114 40360, E-mail : cbr@igcar.ernet.in

### **Course in Education Management**

The Department of Education Management, SNDT Women's University, Mumbai offers a one year Post Graduate Diploma in Education. The course is designed to provide an understanding of basic management concepts and their application in an educational environment.

Interested persons may contact Deptt of Education Mgt., SNDT University, Mumbai.

### **Science & Technology Articles in Tamil**

The Bharathidasan University is reported to have decided to translate articles of national and international standards in the field of science and technology into Tamil, which would be brought out in the form of regular journals.

Dr. P. Jagadeesan, Vice-Chancellor, said the task would be undertaken specifically for promoting Tamil medium in higher education. The university had selected science and technology as the area of concentration to create an awareness on the latest developments in the field, he said.

The university plans to sign an MoU with the Bhari Information

Technology Systems Pvt. Ltd., (BITECH), Chennai, to run certain courses such as computer science and information technology. The university also planned to introduce new courses such as Master of Financial Management in the commerce faculty and Master of Fine Arts (MFA) in Bharatanatyam and Music and M.S. Information Technology from the ensuing academic year. The syllabi for PGDCA, MCA and M.Sc. Computer Science courses had been revised to include the latest technology developments in the field, he said.

The university's Community College will offer the following new courses from this academic year : diploma in computers and management, diploma in marketing management, diploma in business management and advanced PG diploma in computer applications.

### **Science in Physical Education and Sports**

A national seminar on role of science in physical education and sports, was conducted by the Department of Physical Education Alagappa University recently. Prof. Salihu, Vice-Chancellor, Madurai Kamaraj University in his managerial address stressed compulsory physical education at school, college and university level.

Dr. M.L. Kamalesh, Dean, LNIPE, Thiruvananthapuram, while delivering the keynote address emphasised that light approach, light interacting, light cooperatyon and light cohesion could only bring the laurels to the country. He also insisted on scientific and systematic approach to any problem.

Five scientific sessions were organised in sports physiology, sports biomechanics, sports psychology, sports training and sports management.

Nearly 50 papers were presented by delegates from Andhra Pradesh, Kerala, Karnataka and Pondicherry and Tamil Nadu. Altogether 129 delegates from all over the country participated.

Dr. V.S. Sethu Madhava Rao, who presided over valedictory function emphasised scientific approach in games and sports.

### **World Social Science Report**

UNESCO has released its first world social science report, the latest in the series of world reports published by it in recent years on education, natural sciences, communication and culture.

The report deals with some crucial problems of present day such as science and technology in society and development and environment and asks what contributions social sciences have made to understanding, managing, and ultimately solving these problems.

It also examines how the social sciences are currently organised, financed and practised in different parts of the world, and the questions tackled include the provenance, processing, analysis and transmission of data, and relations between social science research policy, politics, ethics and the media.

### **Certificate Courses in Astrology**

The Chaudhary Charan Singh University, Meerut proposes to introduce one year certificate course in Muharatvit and Jyotirvit from this academic session.

Admission to these courses will be open to graduates. Besides providing systematic knowledge in the field of astrology, the courses are intended to attract youngsters

to take up astrology as a profession, said Dr. Sudhakaracharya Tripathi, head of the Sanskrit department.

### **Refresher Course in Applied Research**

The Department of Applied Research of Gandhigram Rural Institute recently organised a UGC sponsored Refresher course in Applied Research in Social and Applied Sciences for the college and university teachers. The course was designed with a view to strengthen the skills and expertise among the college teachers by enriching their knowledge in research methods and statistical techniques. It enabled the teachers to discuss the methodological issues and problems in undertaking research in applied and social sciences.

There were 55 lecture demonstration sessions apart from field visits and project work. Environmental Pollution, Energy Conservation, Panchayati Raj, Peace Research were some of the emerging areas taken up for discussion and detailed deliberations during the course.

The participant interaction sessions provided the teachers ample opportunities to present the research experiences from their own field and explore the possibility of undertaking interdisciplinary research in social and applied sciences.

Dr. N. Markandan, Vice-Chancellor of the Institute in his address stressed the need of research in all branches for the development of society. He observed that research should be conducted systematically in order to achieve the developmental goals and appealed to the teachers to give much importance to the applied aspect and analyse the problems of the com-

munity instead of merely doing research for the sake of a degree.

Dr. K.M. Karuppanan, Principal, R.V.S. Engineering College, Dindigul in his address highlighted the role and issues in the priority area of research on 'Rural Technology'

### **CSIR Librarians' Convention**

National Botanical Research Institute, Lucknow recently organised a 3 days Convention of Heads of Libraries and Information Centres. The focal theme was "CSIR Libraries and Information Centres in the 21st Century". Subthemes of Convention were

- Electronic, Digital Libraries
- Library Networking & Resource Sharing
- Collection Development
- Library & Information Services in changed situation
- Impact on Library Management
- CD-ROM, Internet, Networks and other Technological Devices & their access modes.

Dr. P. Pushpangadan Director NBRI, Lucknow delivered the welcome address. He said that the need of the hour was to make India creator not the imitator in the next century. Using the latest Information Technology the country could lead the world in this field.

Dr. R.A. Mashelkar, Director General CSIR, the Chief Guest, said that the society was gradually being dominated by Information & Communication Technology. He suggested that the libraries instead of working as mere centres of information, should become the centres of knowledge. He focused on the importance of Internet by quoting a study that mentioned every



school going child in United States would have an access to Internet by the year 2000 and opined that the Librarians too should be trained to evolve their thinking.

Dr. T. Vishwanathan, Director, INSDOC, New Delhi in his keynote address said that proper networking could save about 40 per cent of time which people wasted in commuting from one place to another besides, reducing nearly 60 per cent of pollution spread through vehicles.

The book "Current Development in Library & Information Science by Dr. P.P. Rawat, Chief Librarian, SGPGL, Lucknow and the Souvenir were also released by Dr. R.A. Mashelkar on the occasion.

Dr. S.R. Sinakar, Head, NEERI Library, Nagpur urged for the need of information about Indian environment on Internet.

The convention adopted a 16 point resolution which besides pointing out the significance of information technology suggested bringing about qualitative changes in meeting the expectation of Scientific Community at large.

More than sixty participants all over the country attended the Convention.

### **We Congratulate...**

1. Prof. Pradipeswar Bhattacharjee, who has been appointed Vice Chancellor of Tezpur University.

2. Professor N.S. Ramegowda, who has been appointed Vice-Chancellor of the Karnataka State Open University, Mysore.

3. Dr. Pon. Kothandaraman, who has been appointed Vice-Chancellor of the University of Madras, Chennai.

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5. Bachelor of Library & Information Science (BLib & I.Sc.) (1-year)

#### **MASTER DEGREE COURSES :**

6. Master of Arts (MA) (2-year): Hindi, English, Sanskrit, Panjabi, Political Science, Public Administration, History, Economics & Mathematics
7. Master of Science (MSc) Mathematics (2-year)
8. Master of Commerce (MCom) (2-year)
9. Master of Financial Management (MFM) (2-year)
10. Master of Library & Information Science (MLib & I.Sc.) (1-year)
11. Master of Marketing Management (MMM) (3-year)  
(1-year after PGDMMM) (Admission only to Part-I & III)

#### **MASTER OF PHILOSOPHY COURSES:**

12. Master of Philosophy (MPhil) (1-Year) : Hindi, English, Sanskrit, Punjabi, Political Science, Economics, Mathematics, Physical Education & Commerce

#### **CERTIFICATE/DIPLOMA COURSES:**

13. Certificate in Computer Applications (CCA) (1-year)
14. Diploma in Library & Information Science (DLib & I.Sc.) (1-year)
15. P.G. Diploma in Computer Applications (PGDCA) (1-year)
16. P.G. Diploma in Journalism & Mass Communication (PGDJMC) (1-year)
17. P.G. Diploma in Translation (Hindi/English) (PGDT) (1-year)
18. P.G. Diploma in Environmental Education (PGDEE) (1-year)
19. P.G. Diploma in Tour & Travel Management (PGDTTM) (1-year)
20. P.G. Diploma in Export Marketing Management (PGDEMM) (1-year)
21. P.G. Diploma in Marketing Management (PGDMM) (2-year)
22. P.G. Diploma in Tourism & Hotel Management (PGDTHM) (2-year)

Admission to Courses at Sr. No. 1,2,3,13 & 15 can also be sought through the centres of ZEE EDUCATION of ZEE TV.

In the GULF COUNTRIES the Students can enrol themselves through the WISDOM INSTITUTE, P.O. BOX 26791 (Near Bus Juman Centre) DUBAI, (UAE) with centres at ABU DHABI and DOHA.

PROSPECTUS containing admission form and other details can be had from the Manager (P & P), K.U. Kurukshetra - 136 110 on payment of Rs. 70/- at the counter or by sending a Bank Draft of Rs. 100/- in favour of the Registrar, K.U. Kurukshetra (Rs. 40/- & Rs. 70/- respectively for SC/ST candidates). Candidates must send two self-addressed slips with their request for Prospectus and also indicate code No. CC-99 on the envelope.

**Last date : 30.09.1999**

**DIRECTOR**

# THESES OF THE MONTH

## A list of doctoral theses accepted by Indian Universities (May-June 1999)

### HUMANITIES

#### Fine Arts

##### Drawing & Painting

1. Joshi, Rashmi. *Madhya Pradesh ke lok kalayon mein jan kalyan ka sandesh*. Department of Drawing and Painting, Barkatullah University, Bhopal.

##### Geography

1. Chaturvedi, Arun. *Socio-economic constraints in optimisation of land use in Chhindwara District, MP*. (Prof V H Deodhar), Department of Geography, Nagpur University, Nagpur.

2. Goswami, Girish Chandra. *Tribal and non-tribal population of Darrang District, Assam : A social geographic study*. (Dr Md Taher), Department of Geography, Gauhati University, Guwahati.

3. Hangze, Manzathin. *Spatial pattern of HIV prevalence in Manipur and its impact on the society and economy of Manipur*. (Dr Rocket Ibrahim), Department of Geography, Jamia Millia Islamia, New Delhi.

4. Mishra, Priyadarshini. *Vidisha Jile ke grameen sewa kendra : Ek adhivas bhugoliya adhyayan*. (Dr Sarojini Pacholi), Department of Geography, Barkatullah University, Bhopal.

5. Narsimhan, Kalyani. *Analytical study of curriculum of Geography in schools with special reference to Maharashtra, UP, Tamil Nadu, West Bengal and Madhya Pradesh*. (Prof V H Deodhar and Prof M P Salodkar), Department of Geography, Nagpur University, Nagpur.

6. Samant, Vishwanath. *Midnapore District : A study in agricultural characteristics and development*. (Dr K Tripathi), Department of Geography, Guru Ghasidas University, Bilaspur.

#### History

1. Anand, Indu. *Facts of society and culture in the Mughal paintings under Akbar, Jahangir and Shahjahan*. (Dr Syed Jamaluddin), Department of History, Jamia Millia Islamia, New Delhi.

2. Datta, Partha. *Colonial Calcutta : The urban experience, 1800-1930*. (Dr Narayani Gupta), Department of History, Jamia Millia Islamia, New Delhi.

3. Nusrat Jahan. *Bhopal ke adhunikikaran mein Nawab Sultan Jahan Begam ka yogdan*. (Dr Manjula Sharma), Department of History, Barkatullah University, Bhopal.

#### Language & Literature

##### English

1. Lamba, Pinkey. *An artist's vision of life : A study of the novels of William Golding*. (Dr G C Saxena), Department of English, Barkatullah University, Bhopal.

2. Muhammed, Asha. *The search for identity in Caribbean fiction*. (Dr R Viswanathan), Department of English, University of Calicut, Calicut.

3. Sethi, Tanuja. *Women characterisation in Hardy's major novels*. (Dr I Y Khan), Department of English, Barkatullah University, Bhopal.

##### Hindi

1. Chaturvedi, Anjalika. *Khandwa Jile ke Gondi ka varnanatmak vishleshan*. (Dr H L Shukla), Department of Linguistics, Barkatullah University, Bhopal.

2. Chhotu Prasad. *Bauddh darshan ka Hindi sahitya ke vishesh sandarbh mein anusheelan*. (Dr Kapil Deo Mahto), Department of Hindi, Vinoba Bhave University, Hazaribag.

3. Matole, Seema. *Nareesh Mehta ke kavya mein bimb vidhan*. (Dr H L Shukla), Department of Hindi, Barkatullah University, Bhopal.

4. Pannalal. *Dr Kishori Lal : Vyaktitva evam krititva*. (Dr Vinay Dubey), Department of Hindi, Barkatullah University, Bhopal.

5. Sharma, Anita. *Hindi ghazal aur Dushyant Kumar*. (Dr B L Achchha and Dr K N Vashishtha), Department of Hindi, Barkatullah University, Bhopal.

6. Thomas, Indira Rani. *Kamaleshwar ke kahaniyan: Samvedana aur shilp*. (Dr M Easwari), Department of Hindi, Cochin University of Science and Technology, Kochi.

##### Sanskrit

1. Vasistha, Shaloo. *Lok aur shastra ke antravalamban ka anusheelan : Gondi aur Sanskrit ke vishesh sandarbh mein*. (Dr H L Shukla), Department of Sanskrit, Barkatullah University, Bhopal.

##### Telugu

1. Kanakaiah, MC. *Critical study of the published free verse in Telugu on incidents from 1971-1995*. Department of Telugu Literature, Potti Sreeramulu Telugu University, Hyderabad.

##### Urdu

1. Sarvat Jahan. *Madhya Pradesh mein Urdu shairi ka jadeed milan*. (Dr Aziz Ansari), Department of Urdu, Barkatullah University, Bhopal.

##### Religion

1. Gul, Surayia. *Development of Kubraviya Sufi order in Kashmir with special reference to Mir Saiyid Ali Hamdani*. (Prof Akhtarul Masey), Department of Islamic Studies, Jamia Millia Islamia, New Delhi.

2. Shah, Ghulam Mohammad. *Kashmir mein tasawwuf ke tarveej mein Reshi Sufi ka hissa*. (Prof Akhtarul Masey), Department of Islamic Studies, Jamia Millia Islamia, New Delhi.

# BOOK REVIEW

## Get Through NET

Nirmal Kumar Swain\*

**S.P. Sood, Jaipur. Multiple Choice Questions in Library and Information Science. Raj Publishing House, 1999. Pp. ii + 192. Price not stated.**

NET and SET stand for National Education Test and State Education Test respectively. A pass in these tests in the subject, Library and Information Science, is essential for eligibility to be a lecturer in the subject, assistant librarian of university libraries and a college librarian. This book can be an asset to the NET/SET aspirants. But it is to be noted that, this volume contains only paper I of the syllabus, which is of 'multiple choice' pattern.

At a glance, the 'contents' page shows the full coverage of the NET syllabus, various components of which are :

1. Library and Society.
2. Library and Information Management.
3. Classification.
4. Cataloguing & Indexing.
5. Reference & Information Services.
6. Information Science.
7. Universe of knowledge and Research methodology.
8. Computer and Information Technology.

One of the remarkable aspects of the book is that Sood has consulted the previous years' NET questions and planned the book in such a way that the users of the book should not feel the questions redundant. It is also observed that

some of the questions of previous years' are shuffled and re-arranged and some questions are listed 'as they were'. This would be helpful for the freshers or first timers, who have never seen the question pattern before. For example Q. 133. "Grey Literature" means : (1) Audio-Visual materials. (2) Unpublished Seminar reports. (3) Internal reports not published as documents. (4) Archival documents. (chap. 1; p. 23.)

A good coverage has been provided to 'Information Technology' and 'Research Methodology.' Sometimes fresh pass outs are not

well acquainted with these two aspects of Librarianship. Like Q. 113. The Information technology used for simulation of the human thought is known as : (1) Thinking Simulation. (2) Third generation computers. (3) Thought process mechanisms. (4) Artificial Intelligence. (Chap. 8; p. 183)

Again Q. 20. A proposition which is yet to be put to test for determining its validity is called : (1) Generalization. (2) Law (3) Hypothesis. (4) Theory.

(Chap. 7; p. 160).

However, the reviewer observed that the book missed certain things from users' point of view. The user would certainly like to see the syllabus and also previous years questions of paper II of the subject. Nevertheless, it will be of enormous use for the NET/SET aspirants, as well as the examinations conducted by the central government agencies like UPSC, SSC etc.

\*Asstt. Professor, Library & Information Science, Banasthali Vidyapeeth, Banasthali-304 022.

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Admission to the Course will be made on the basis of written test, interview, work experience (if any) and previous academic records.

Intake - 60 (including a few deputed candidates).

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Application Form with Information Brochure can be obtained from the Institute of Business Management P.O. Jadavpur University, Calcutta-700 032 between 4.00 p.m. and 7.00 p.m. on all working days from Monday, 5th July, 1999 to Saturday, 7th August, 1999 on payment of Rs. 200/- in cash/draft.

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Organisations sponsoring candidates (executives of at least 2 yrs standing) must apply in writing to the Hony. Secretary for issue of prescribed Application Forms on payment of Rs. 200/- each.

Form can also be obtained by post on payment of Rs. 200/- in Crossed Bank Draft payable to "N.C.E., Bengal, A/c. I.B.M." at Calcutta and the request should be accompanied by postage stamp of Rs. 10/- only.

Last date for receipt of completed application form with prescribed registration fee of Rs. 200/- is Monday, 9th August, 1999.

Written Test will be held in Calcutta on Sunday, the 29th August, 1999.



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CSIR, the premier agency established by the Govt. of India to undertake scientific and industrial research in the country, is looking for suitable scientist/technologist for the post of Director for its Regional Research Laboratory (RRL), Jammu. The major R&D programmes of the Laboratory relate to development of natural resources and products of and for the region; herbal drugs and pharmaceuticals; and organic chemistry.

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Interested candidates may send their complete biodata by 13th August, 1999 to the Director-General, CSIR, Rafi Marg, New Delhi-110 001 (FAX - 3710618; E-mail:dgcsir@csirhq.ren.nic.in).



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Applications can also be had in person from the Directorate of Distance Education and the following Study Centres and Information Centres on payment of Rs.50/- (US \$ 10/- for overseas candidates). Application form for all courses will be issued upto 20.09.1999. The last date for receipt of filled-in application is 25.09.1999.

*All the Study Centres and Information Centres except that at Annamalai Nagar will remain closed on all Tuesdays, Second Mondays and other public holidays.*

**SPOT SELECTION:** Spot selection for admission to the preparatory course is made through all our Study Centres for all courses. Those who passed the Entrance Test during 1996-97, 1997-98 & 1998-99 but could not join the courses are also eligible for admission without undergoing the Entrance Test this year.

Applicants are advised to write to the Directorate individually for application forms and admission. The Directorate has no agents. Spurious applications would be summarily rejected.

PLACE: Annamalai Nagar

DATE: 24-08-1999

Dr. L. B. VENKATRANGAN

DIRECTOR

**STUDY CENTRES:** (1) CHENNAI: 19, Rukmani Lakshmi Pathi Road, Egmore, Chennai - 600 008 (☎ 8555010); (2)\* 27, North Park Street, Venkatapuram, Ambattur, Chennai - 600 053; (3) 138, G.S.T. Road, (Opp. to Vetri Theatre), Chrompet, Chennai - 600 044; (4) TIRUCHI: 32-B, 7th Cross, Thilai Nagar, Tiruchi - 620 018 (☎ 760950); (5) SALEM: 15, Dr. Subbarayan Street, Salem - 636 001 (Near Palace Theatre) (☎ 419660); (6) NAGERCOIL: 316-E, K.P. Road, Nagercoil - 626 003 (☎ 30561); (7) TIRUNELVELI: ROCHE Buildings, No.1-C, High Ground Road, Palayamkottai, Tirunelveli - 627 002 (☎ 572923); (8) VELLORE: 4, Thiagarajapuram, Vellore -

632 001 (Near Lakshmi Theatre) (☎ 227647); (9) MADURAI: 176, North Vell Street, Madurai - 625 001 (☎ 628327); (10) COIMBATORE 72, Sarojini Street, Ram Nagar, Coimbatore - 641 009 (☎ 234408); (11) KARAIKUDI: 7, Seventh Street, Subramaniapuram, Karaikudi - 630 002. (☎ 23417); (12) NEW DELHI: 51-A, Institutional Area, Thughlagabad, (Near Batra Hospital), New Delhi - 110 062. (☎ 6867638); (13) CALCUTTA: 19, Sardar Sankar Road, Calcutta - 700 029 (☎ 4667215).

(\*Information Centres).